



010225 a re/fee

MOISTURIZING SKIN TREATING PRODUCT AND PROCESS

SPECIFICATION

Field of the Invention

This invention relates to a new moisturizing skin product and process, and more particularly relates to a moisturizing skin process and method which allows the product to be sprayed on the skin.

Background of the Invention

In recent years, scientists and researchers involved in the study of skin ageing have agreed that moisturizing will improve the feel and texture of the skin, and help to stall the formation of wrinkles due to dry skin. Moisturizing also combats a slow decline in the skin's natural water managing capacity and skin can remain more faithful to its function as a barrier when it is moisturized.

A good skin moisturizer also can minimize the effects of ageing on your skin. Moisturizing is a step which will protect your skin against the effects of external environmental factors. The skin has highly specialized two-layer structure which is constantly regenerating itself. The outermost layer is called the epidermis and is composed of flat "dead" skin cells that contain the protein keratin, plus a deep layer of living cells. When the skin is healthy the living cells move to the surface in a continual two-to-four week cycle, and form a protective layer called the stratum corneum. As new cells are generated in the lower level of the epidermis, the top older cells harden and die. These cells are then shed from the surface of the skin as microscopic flakes. As skin matures, cell renewal takes much longer and needs ever increasing moisture to protect against external factors.

All types of skin need some moisturizing but the face, which is constantly opposed to the elements, can cause important

"Express Mail" mailing label number 348792865  
Date of Deposit FEB 3, 1987

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20234.

DAVID O'REILLY

Reg. No. 26, 102

1 moisture loss through evaporation. Moisturizers help the top  
2 layer of the skin retain its natural water content by providing  
3 ingredients that attract water and seal it into the top layers  
4 of the skin. Further, moisturizers condition the texture of the  
5 skin minimizing the appearance of lines and small wrinkles that  
6 form when the skin dries out. This outer layer of cells is the  
7 layer that is of interest to us.

8 After years of study and experience water has gained  
9 favor and is now recognized as the best and most effective  
10 moisturizer available, as it most closely resembles the natural  
11 moisture of the skin. Dermatologists have known for years the  
12 many benefits of using water to replenish precious moisture  
13 lost. While aware of this fact the methods of moisturizing were  
14 often cumbersome and messy.

15 Recent studies of genetics and cell structure have shown  
16 that a protein reportedly slows the aging process by helping the  
17 skin to retain moisture. Such products take the form as creams  
18 which are spread on the skin to help the skin retain the  
19 moisture. These products are in the form of emollients, and  
20 creams which in some cases are applied to the skin and left on  
21 overnight. Others are rubbed into the skin to retain moisture  
22 during the day. A problem with these particular products is  
23 that some are extremely expensive, and most are inconvenient and  
24 messy to apply. It would be advantageous if a product were  
25 available that could be easily applied anywhere, anytime, night  
26 or day, to instantly help in moisturizing and retaining moisture  
27 in the skin.

28 It is therefore, one object of the present invention to  
29 provide a unique method of applying and binding moisturizing  
30 water to the skin.

31 Another object of the invention is to provide a unique  
32 product which will moisturize the skin, in addition to aiding in

1 retaining the moisture.

2 Yet another object of the present invention is to provide  
3 a unique method and product for applying nature's best  
4 moisturizer with the added benefits of using a <sup>3</sup>collagen to bind  
5 the moisture in the skin.

6 Yet another object of the present invention is to provide  
7 a product comprised of a mixture of water with a small amount of  
8 collagen to provide a unique product and method for moisturizing  
9 the skin.

DRC L, 10/11  
10 Brief Description of the Invention

11 P The purpose of the present invention is to provide a skin  
12 moisturizer for applying nature's best moisturizer which  
13 includes the added benefits of using a <sup>3</sup>collagen to bind the  
14 moisture in the skin which can be conveniently applied anytime,  
15 anywhere - purified.

16 <sup>13</sup>These purposes are realized by mixing a collagen with  
17 water to allow it to be easily sprayed onto the skin. Collagen  
18 is the fibrous protein in the dermis (the layer of cells just  
19 below the surface of the skin) that gives the skin its firmness  
20 and resiliency. Collagen has been found to act as a binding  
21 agent with water, which traps moisture against the skin cells  
22 without clogging or contaminating the pores of the skin. The  
23 product and method disclosed herein can help to speed cell  
24 turnover and keep young fresh cells moisturized to perhaps  
25 somewhat slow the decline in aging of the skin. With the  
26 product and process of the present invention skin cells are  
27 allowed to absorb and retain the renewing benefits of water.

28 The present invention is comprised of a collagen which is  
29 an animal extract in propylene glycol water at a 50 - 50 ratio.  
30 This collagen is soluble in water in almost any proportion. <sup>13</sup>  
31 The formula for the product is to add approximately one to two  
32 percent collagen with Deionized Water in approximately each

1 eight ounces of the formula. A small amount of approximately  
2 0.3% to 0.5% DMDM Hydantoin is also added to the formula as a  
3 preservative. This is a formula for moisturizing most normal  
4 skins and can be used by all.

5 An alternative formula adds a cucumber extract sometimes  
6 known as Cucumber HS, extract of cucumber, or Cucumis Satibus  
7 Extract. This particular formula is considered useful for  
8 people with oily and/or blemished skin condition. The formula  
9 is the same as before having one to two percent collagen,  
10 combined with one to two percent cucumber extract in addition to  
11 0.03% to 0.05% DMDM Hydantoin preservative with the balance  
12 being Deionized Water to make up eight ounces of product.

13 The unique method of applying the product is by a very  
14 fine spray, or mist. Preferably only Deionized Water is used  
15 eliminating any minerals or contaminants from reaching the skin.  
16 The formula is sprayed on the skin in a very fine mist using a  
17 constant pressure sprayer, such as a Calmar Mark 11 Sprayer  
18 manufactured by Calmar Dispensing Systems, 40 Sterling Road,  
19 Watchung, New Jersey, 07060. This particular sprayer is  
20 preferable because it produces a very fine uniform spray  
21 pattern. Further, the spray uses a non-throttling system  
22 preventing dripping or jetting however stroked. The delivery  
23 volume is approximately 0.14cc (cubic centimeters) per stroke,  
24 through an orifice measuring 0.012 inches. The combination of  
25 pure ingredients with the use of this accurate fluid misting  
26 sprayer, assures the user of a dripless fine mist delivery of  
27 uncontaminated solution to dry skin.

28 The above and other novel features and advantages of this  
29 invention will be more fully understood from the following  
30 detailed description.

31 Detailed Description of the Invention

32 P The formula disclosed herein of Deionized Water and

1 collagen when sprayed create an atmosphere conducive to the  
2 growth and development of new, fresh skin cells. In addition,  
3 the formula when sprayed on the skin rehydrates dry cells  
4 already present on the surface of the skin. Water is widely  
5 accepted as nature's best moisturizer and is the best  
6 moisturizer available. The use of a collagen in the formula  
7 assists in binding the water to the surface of the skin cells  
8 without clogging or contaminating the pores of the skin.

9 Unlike the various expensive moisturizing creams or  
10 topical ointments presently available the formula disclosed  
11 herein allows the user to apply the needed moisturizer at any  
12 time. There are no messy creams to apply and the moisturizing  
13 product disclosed herein can be applied when it is needed most.  
14 After work, at play or exercise, the moisturizing formula can be  
15 quickly and easily sprayed in a convenient easy manner, using a  
16 spray bottle such as the Calmar Mark 11 referred to hereinabove.  
17 Skin can be rehydrated immediately without the need for a sink,  
18 mirror, bathroom, water source or towels. In addition, the  
19 formular is economical and affordable as only a small amount of  
20 the very expensive collagen thoroughly mixed with the water  
21 solution is needed eliminating the need for applying large  
22 amounts of expensive creams. The proper amount is easily  
23 dispensed with each stroke of the pumping system.

24 The invention involves the use of several separate  
25 formulas, one is a formula employing a collagen in combination  
26 with a purified water for use on normal and all types of skin  
27 conditions. A second formula is provided for people who have  
28 very oil and/or blemished skin conditions. The latter formula  
29 was created primarily for men, the majority of which have oily  
30 skin conditions, it provides moisture for an often dehydrated  
31 oily complexion. A third formula is provided for use by people  
32 with extremely dry or rough skin conditions. This combination

1 or formula performs an enriched moisture.

2 A general all purpose formula by weight is as follows:

- 3 P 1. 98.7% Deionized Water.  
4 P 2. 1.0% Soluble Animal Collagen (Bovine)  
5 P 3. 0.3% DMDM - Hydantoin

6 PS Where the products are:

7 P Deionized Water - neutral ph, without minerals or other  
8 contaminants. 13

9 P Soluble Collagen - protein fiber found in skin and is a collagen  
10 extracted from bovine tissue. 13

11 P DMDM Hydantoin - organic preservative. 13

12 P The first specific formula which can be used by everyone  
13 and can stand alone or work with almost any skin care program  
14 and is effective and safe for all types of skin. This Formula  
15 is comprised of a collagen sometimes known by the trademark name  
16 Actigen C, which is an animal extract in propylene glycol water  
17 50-50. This collagen is a protein fiber found in the skin which  
18 helps build water level by holding moisture-filled fibers close  
19 to the skin's surface. The collagen, it is believed, produces  
20 younger looking more supple skin due to increased moisture  
21 retention and content. The collagen, it is believed, works to  
22 decrease lines and wrinkles caused by lack of moisture. The  
23 collagen used is an extract produced from bovine tissue. 3

24 Further, the collagen is soluble in water at any  
25 proportions and preferably has a pH of 4.5 to 7.0 and a specific  
26 gravity of 1.02 to 1.15, at approximately 25 degrees centigrade.  
27 Also, the collagen should have a microbrial count of less than  
28 100 organisms per gram.

29 This particular formula for use on all skin care programs  
30 is comprised of:

- 31 P 1. 1% - 2% Collagen. 14  
32 P 2. 0.03% - 0.05% DMDM Hydantoin (organic preservative). 14

1 P 3. Balance of Deionized Water to complete approximately  
2 eight ounces of formula.

3 P The percentages given are by weight of the product rather than  
4 by volume.

5 P A second formula created especially for people with  
6 a rather oily skin conditions, which applies primarily to men,  
7 can provide moisture for often dehydrated oily complexions.  
8 This formula is substantially the same as that listed above, but  
9 with the addition of a extract of cucumber known by the common  
10 names Cucumber HS, Extract of Cucumber, Cucumis Sativus Extract.  
11 It is also known by the trademark name of Actiphyte of Cucumber.  
12 The major constituent of the cucumber extract is 96% water.  
13 This moisturizing formula is comprised of;

- 14 P
- 15 1. 1% to 2% collagen.
  - 16 2. 1% to 2% cucumber extract, described hereinabove.
  - 17 3. 0.03% to 0.05% DMDM Hydantoin.
  - 18 4. Balance of Deionized water to produce eight ounces of  
19 formula.

20 P The later formula as described above utilizes the  
21 cucumber extract which assists in moisturizing the skin of  
22 people with oily and/or blemished skin conditions. This  
23 particular form was created primarily for men, the majority of  
24 which have an oily skin condition, it provides and retains  
25 moisture for often dehydrated oily complexions.

26 The third formula includes a product which prepares the  
27 skin for moisture. This product is known by the common name of  
28 Panthenol providing a lubricating moisture-building blend to the  
29 collagen and Deionized Water to smooth lines and reduce visual  
30 effects of aging. This particular formulation was produced  
31 particularly for people with extremely dry or rough skin  
32 conditions, this combination of compounds forms an enriched  
moisture. The formula utilizes a product known by the trademark

1 name Dexpanthenol, which is prepared by the addition of  
2 (Q2) propanolamine to optically active  $\alpha$ ,  $\gamma$ -dihydroxy- $\beta$ - $\beta$ -  
3 dimethylbutyrolactone known by the common name Panthenol and is  
4 a viscous somewhat hygroscopic liquid. The product is  
5 generally in the form of a white powder freely soluble in water  
6 and has a natural pH of about 9.5. The formula is as follows:

- 7 1. 1% to 2% collagen.  
8 2. 0.5% to 1.5% Panthenol.  
9 3. 0.03% to 0.05% DMDM Hydantoin.  
10 4. Balance of Deionized Water to complete eight ounces  
11 of formula.

12 P These formulas once mixed remain substantially clear and  
13 light in texture and are retained in an extra fine mist allowing  
14 full absorption by the skin when sprayed on. The advantage of  
15 the particular formulas described are that they allow the user  
16 to replenish and rehydrate dry damaged skin at anytime,  
17 anywhere. The product also allows a convenient method of  
18 applying nature's best moisture with a collagen binder without  
19 the use of messy creams and ointments. The collagen found in  
20 the formulas listed above act as a binding agent between skin  
21 cells and clear contaminated-free Deionized or pure water.  
22 Further, a collagen acts to hold the water against the skin  
23 cells allowing the skin cells to rehydrate without clogging the  
24 pores of the skin.

25 The product disclosed and described herein is an  
26 effective treatment to replenish to skin from moisture loss due  
27 to the drying effects of sun, wind, heat, cold, air-born  
28 impurities and toxin. It lets you replenish the loss anywhere  
29 right on the spot by simply spraying the formula directly on the  
30 skin. There is no rubbing or any other particular activity or  
31 time needed for application. Further, only the proper pre-mixed  
32 amount is applied to the skin. There is no waste or overuse



1 typical of creams or lotions which results in excessive costs  
2 and wastes money. The formulas disclosed herein are a perfect  
3 suplement to any skin care program that women might use and will  
4 not disturb hair, make-up or clothing. It is particularly ideal  
5 for use immediately after applying make-up to help seal and set  
6 the make-up for the day.

7 This invention is not to be limited by the embodiment  
8 described in the description which is given by way of example  
9 and not of limitation, but only in accordance with the scope of  
10 the appended claims.  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32